

Application No.: 10/057,959

Docket No.: 30012961-2US (1509-269)

Amendments to the Drawings:

The attached sheet of drawings includes changes to Figures 1a, 1b, 1c, 2, 3, 4a and 4b (4 sheets).

Application No.: 10/057,959Docket No.: 30012961-2US (1509-269)**REMARKS**

The Office Action of August 24, 2005 has been considered in detail, and Applicants' hereby submit their comments to the Office Action below.

New drawings are submitted herewith. The new drawings are of a quality that complies with the requirements of the U.S. Patent and Trademark Office. In addition, the various drawing objections set forth in items 2-5 on pages 2-4 of the Office Action are believed cured by the new drawings.

The specification has been amended where appropriate to reflect the changes to the drawings, to correct the objectionable points raised in the Office Action, as well as a few matters noted by the attorney for Applicants.

The claims have been amended for clarity, to assure infringement of the apparatus claims at the time the goods are sold and prior to being put into use, and new claims 21-24 have been added. The subject matter of newly added claims 21-24 can be found in the specification as filed on page 1, lines 7-22 and page 10, lines 5-22. Applicants note that claims 23 and 24 are infringed when a source computer is sold, without a terminal responsive to the source computer.

Applicants traverse the rejection of claims 1, 2, 5-13 and 16-20 as being unpatentable over the combination of Slezak (U.S. Patent 6,647,119), Brandenburg et al. (U.S. Patent 6,115,688), and the King et al. article entitled "The Impact of Signal Bandwidth on Auditory Localization." The rejection is a classic case of hind sight. In fact, the references demonstrate the unobviousness of Applicants approach to the problem. In this regard, Slezak merely discloses that it is known to have a computer terminal with plural speakers that are selectively activated. The admitted prior art discussed in the application as filed admits this feature to be

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known.

Brandenburg et al. is relied on to disclose coding an audio signal so coded signals with low quality have a low bit rate, and coded signals with high quality have a high bit rate. King et al. indicates wide bandwidth signals must be transmitted to a three dimensional audio cockpit display to convey the spatial location of a potentially lethal threat to a user of the three dimensional cockpit display. Presumably, the signal supplied to the different speakers of the three dimensional audio cockpit display are supplied to the speakers via different channels.

Based on the foregoing, none of the references applied against claims 1, 2, 5-13 or 16-20 discloses the requirement of claim 1 for generating from plural audio components, a first set of spatially processed data for transmission over a data link at a first rate, and individually transmitting each of plural audio components at a bit rate which is lower than the first bit rate. The King et al. reference indicates the unobviousness of such an approach because King et al. applied wideband audio signals to all speakers of the three dimensional cockpit.

Brandenburg et al. does not fill the gap, because Brandenburg et al. is not concerned with multi-dimensional acoustic systems, as disclosed by King et al. and Slezak. In fact, Brandenburg is further evidence of the unobviousness of the combination of the independent claims. In Brandenburg et al., the user must select a simulated sound source, such as "e-mail notification," to adjust; see column 10, lines 1-3. In Applicants' arrangement, no such user selection is necessary because of the first set of spatially processed data.

Independent claim 10 is allowable for reasons similar to those set forth in connection with claim 1. In particular, claim 10 requires an audio source means arranged to derive plural audio components, each component comprising audio data relating to an audible sound track and positional data. From the plural audio components, there is derived a first set of spatially

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processed data for transmission over a data link at a first bit rate and there are individually transmitted audio components at a bit rate which is lower than that of the first rate.

Independent claims 11 distinguishes over the applied art by requiring the playing terminal to receive via a first port plural audio components, each having audio data relating to an audible sound track and positional data relating to a position in three dimensional space, relative to the audio transducer arrangement, at which each audible sound or track is to be perceived. The playing terminal is also arranged to receive, via the first port, the first set of spatially processed data derived by the plural audio components, wherein the spatially processed data are received at a bit rate which is greater than that of each of the plural received audio components. The playing terminal is arranged to generate a second set of spatially processed data from the received audio components and to output the first and second sets of spatially processed data via the second port.

Claim 12 requires a playing terminal to receive a first set of spatially processed data generated by using plural audio components. The spatially processed data are received at a bit rate greater than the bit rate at which audio components are received. By using the plural audio components, a second set of spatially processed data are generated. Simultaneously, the first and second sets of spatially processed data are played from a transducer arrangement connected to the playing terminal.

Claim 20, directed to a computer program stored on a computer-usable medium, requires computer-readable instructions for causing a processing device to receive plural audio components transmitted over a data link from a remote audio source. Each component includes audio data relating to an audible sound or track and positional data relating to a position in three-dimensional space relative to an audio transducer arrangement where each audible sound of track

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is to be perceived. The processing devices is required to receive a first set of spatially processed data generated by using the plural audio components. The spatially processed data are received at a bit rate which is greater than the bit rate which each audio component is received. By using the received plural audio components, a second set of spatially processed data are generated. Simultaneously, the first and second sets of the spatially processed data are played from an transducer arrangement coupled to the playing terminal.

Claims 2, 5-9 and 16-19 are allowable for the same reasons advanced for the claims upon which they depend. In addition, claim 6, for example, distinguishes over the applied references by requiring a voice recognition facility to receive audible commands from a user, and to interpret received commands for determining which audible sound track is selected as a focus sound track. The Examiner relies on official notice that voice recognition is a useful user input gathering arrangement. While this is true, there is no evidence of record, and the Examiner has not alluded to any, for indicating audible commands have been used to control selection of audible sounds or tracks as a focus sound or track.

Applicants traverse the rejection of claims 3, 4, 14 and 15 as being unpatentable over the references applied against the independent claims, further in view of Kobayashi et al., "Dynamic Soundscape: mapping time to space for audio browsing." Claims 3, 4, 14 and 15 are allowable with the claims upon which they depend because Kobayashi et al. obviously does not cure the deficiencies discussed *supra* with regard to the rejection based on Slezak, Brandenburg et al., and King et al.

New claims 21-24 provide Applicants coverage to which they are entitled. Claims 21, 22 and 24 require the source computer arrangement to include plural different computer-based services. Claims 23 and 24 require the audio transducer arrangement to include plural audio

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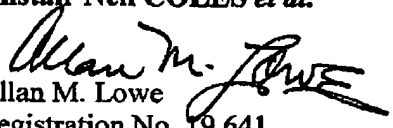
transducers, each associated with a different one of the plural different computer-based services. The high bit rate signal is specifically required to control which of the different transducers is selected, and the low bit rate signal to control the audio output of the selected transducer. Such a combination is not rendered obvious by the art of record.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance are in order.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 08-2025 and please credit any excess fees to such deposit account.

Respectfully submitted,

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